CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No 02/HSN/CEMENT/2014-15

Date: 14.07.2014

TEST REPORT

CLIENT	:	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	:	Mr. H.S. Nataraj, Contractor, Bangalore.
NAME OF THE WORK	:	Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	490 Minutes	Not More than 600 Minutes
3	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/W.No.02/HSN/SAND/2014-15 : 14.07.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

Agency : Mr. H.S. Nataraj, Contractor, Bangalore.

Name of Work : Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014

Date of Testing : 14.07.2014

Material : Sand

Total Wt. of Aggregates in gms 2000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	97	4.85	4.85	95.2	90-100
2.36	226	11.30	16.15	83.9	75-100
1.18	515	25.75	41.90	58.1	55-90
600 Micron	428	21.40	63.30	36.7	35-59
300 Micron	487	24.35	87.65	12.4	8-30
150 Micron	202	10.10	97.75	2.3	0-10

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Job No: CTCE/BBMP/W.No.02/HSN/AGG/2014-15 : 14.07.2014

TEST REPORT ON COARSE AGGREGATES

IS 383-1970 (RA- 2002)

Client : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

Agency : Mr. H.S. Nataraj, Contractor, Bangalore.

Name of Work : Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014

Date of Testing : 14.07.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms 25800

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1015	3.93	3.93	96.07	95-100
20	15560	60.31	64.24	35.76	30-70
10	6140	23.80	88.04	11.96	10-35
4.75	2685	10.41	98.45	1.55	0-5

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.02/HSN/STEEL/2014-15 16.07.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	Mr. H.S. Nataraj, Contractor, Bangalore.
Name of the work	:	Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/YSD/PR/04/2014-15 Dated: 08.07.2014
Date of Test	:	16.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	8	0.40	510	552	13.20	O.K	O.K

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Job No.: CTCE/BBMP/WNo.02/HSN/STEEL/2014-15 16.07.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	Mr. H.S. Naraoj, Contractor, Bangalore.
Name of the work	:	Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014
Date of Test	:	16.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	556	13.45	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.02/HSN/CUBE/2014-15 16.08.2014

TEST REPORT ON CONCRETE CUBES

Client	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Agency	: Mr. H.S. Nataraj, Contractor, Bangalore.
Name of the work	: Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.07.2014	16.08.2014	8.187	495.3	22.01
2	19.07.2014	16.08.2014	8.294	502.6	22.34
3	19.07.2014	16.08.2014	8.375	518.2	23.03

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Job No.:CTCE/BBMP/W.No.02/HSN/WMM/Gradation/2014-15

11.08.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.

Agency : Mr. H.S. Nataraj, Contractor, Bangalore.

Name of Work : Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014

Date of Testing : 11.08.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 26400

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	990	990	3.8	96.3	95-100
22.4	5965	6955	26.3	73.7	60-80
11.2	5425	12380	46.9	53.1	40-60
4.75	4380	16760	63.5	36.5	25-40
2.36	3520	20280	76.8	23.2	15-30
0.600	2535	22815	86.4	13.6	8-22
0.075	2365	25180	95.4	4.6	0-8

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Job No: CTCE/BBMP/W.No.02/HSN/SDBC/Bit/2014-15 18.08.2014

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AS PER IRC:SP:11-1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Mr. H.S. Nataraj, Contractor, Bangalore.
NAME OF THE WORK	Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014
SAMPLE I/D	AD Colony Main Road W.No.02, BBMP, Bangalore.
DATE OF TESTING	18.08.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	474.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	25.50
7. Bitumen content in %	5.00	5.10
8. Average	5.05	

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No : CTCE/BBMP/W.No.02/HSN/SDBC/Bit/2014-15 18.08.2014

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AS PER IS2386 & IRC:SP:11-1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Mr. H.S. Nataraj, Contractor, Bangalore.
NAME OF THE WORK	Providing Asphalting to AD Colony Main Road in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YSD/PR/04/2014-15 Dated: 10.07.2014
SAMPLE I/D	AD Colony Main Road W.No.02, BBMP, Bangalore.
DATE OF TESTING	18.08.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	35.84	7.55	7.55	92.45	90-100
4.75	261.5	55.05	62.60	37.40	35-51
2.36	53.48	11.26	73.86	26.14	24-39
1.18	46.39	9.77	83.62	16.38	15-30
0.3	25.87	5.45	89.07	10.93	9-19
0.075	25.32	5.33	94.40	5.60	3-9

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	42.58	8.97	8.97	91.03	90-100
4.75	253.4	53.40	62.38	37.62	35-51
2.36	58.53	12.34	74.71	25.29	24-39
1.18	35.26	7.43	82.14	17.86	15-30
0.3	32.15	6.78	88.92	11.08	9-19
0.075	33.87	7.14	96.06	3.94	3-6

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